MULTIMEDIA UNIVERSITY ®

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 2, 2018/2019

PCA0150 – COMPUTER APPLICATIONS

(Foundation in Information Technology/ Foundation in Life Sciences)

5 MARCH 2019
2.30 p.m. – 4.30 p.m.
(2 Hours)

INSTRUCTIONS TO STUDENT

1. This question paper consists of **FOUR** pages (excluding the cover page).
2. Answer **ALL** questions.
3. Write your answers in the Answer Booklet provided.

Instructions: Answer **ALL** questions. Write your answers in the Answer Booklet.

QUESTION 1 [10 Marks]

LifeQueen is a large private hospital offering traditional hospital services, online medical consulting and information services. It also conducts medical research and studies.

a. Name **TWO (2)** devices for using pen input AND describe a possible function for each device to the medical doctors at LifeQueen.

(2 marks)

b. The senior technician has proposed to upgrade current computers memory at the information and payment counter. Explain briefly how RAM works AND list **TWO (2)** types of RAM.

(2 marks)

c. LifeQueen's custom software recently received an upgrade from mostly menu-driven interfaces, to a fully Graphical User Interface. List **TWO (2)** advantages of GUI-based software, especially in a hospital.

(2 marks)

d. LifeQueen is using both customised software and packaged software readily available in the market. Describe **TWO (2)** functions at LifeQueen that can be fulfilled by customised software, and **TWO (2)** functions that can be fulfilled by packaged software.

(4 marks)

QUESTION 2 [10 Marks]

a. Freddie is a foundation in management student at Galileo University. He would like to create a website about his hobby which is cycling. Explain briefly to Freddie the **FIVE (5)** steps in web publishing.

(2.5 marks)

b. A home network enables you to use common internet connection among many computers and mobile devices. Identify **FOUR (4)** main hardware needed to set up a home network.

(2 marks)

c. In a database management system (DBMS), a data dictionary contains data about each file in the database and each field in those files. Describe how data dictionary helps ensure data integrity.

(2.5 marks)

d. During system development, members of the project team gather data and information. What is the difference between interview session and joint application design (JAD) session techniques of data gathering?

(3 marks)

Continued...

QUESTION 3 [10 Marks]

a. Match the following statements about popular audio digital formats with the correct descriptions given in the table 1, for example A→ 2

Table 1

	Format
A	WAV
B	MP3
C	WMA
D	AAC
E	OGG

	Description
1	Open source and freely available. It's not controlled by any company.
2	Popular format for transmitting audio on the internet. Once converted, the original size reduced up to 1/10 or smaller.
3	Is used primarily with iTunes and the ITunes music store.
4	Standard format for uncompressed audio for Windows and very large file size.
5	Alternative to MP3 developed by Microsoft for Windows.

(2.5 marks)

b. Creating an effective interactive multimedia presentation requires a few simple guidelines. List **FIVE (5)** of the guidelines.

(2.5 marks)

c. In protecting our computer system, the most secure authentication approach used is biometric authentication. What is biometric? Give **TWO (2)** examples of biometric devices that are often used to provide access to restricted locations.

(2 marks)

d. The most publicized computer crimes involve unauthorized access, in which an intruder gains entry to a supposedly secure computer system. Explain briefly **THREE (3)** techniques used to obtain passwords.

(3 marks)

Continued...

QUESTION 4 [10 Marks]

a. If you are going to move around a lot and you need the data always ready by your side, what are the **TWO (2)** storage media suitable for you? Briefly explain your answer.

(2 marks)

b. You have a 6 years old computer now. The original specification for your computer is:

Processor	: AMD Phenom II X6 1100T
RAM	: 2 GB DDR-II 800MHz
Hard Disk	: 320GB Sata
Graphic Card	: AMD Radeon 5870XT
Monitor	: 17 Inch widescreen LCD
Sound Card	: On board soundcard
Power supply	: 400 W normal power supply unit (PSU)

If you are going to upgrade this computer in order to cater for 3D Rendering process, which **THREE (3)** components will you upgrade and why?

(3 marks)

c. Adam works as a graphics designer at Barracuda Designs. The company just created a new graphics editing software which can add color to old black and white photos to make them look better. Since Adam knows the market well, he is being asked to advise on which software license to distribute the new program under. The company wants to:

- earn back the cost of making the program, and possibly profit.
- maintain their copyright over the program.
- obtain the contacts of the users of the program as potential customers.

There are two types of software licenses which allow for widespread distribution; shareware and freeware. Based on the three points above, comment on whether the types of software licenses mentioned can fulfill each of the company's needs.

(3 marks)

d. Local Area Network depends on two models to communicate with each other. These models govern how each node talk to each other. What are the **TWO (2)** models and give **ONE (1)** advantage for each model.

(2 marks)

Continued...

QUESTION 5 [10 marks]

a. In database management system (DMBS), if we neglect to secure a database, chances increase that the data can become compromised or inaccessible. List **FIVE (5)** steps to secure a database.

(2.5 marks)

b. In system development life cycle (SDLC), describe the responsibilities of a system analyst.

(1.5 marks)

c. What is the function of the following electronic musical instruments that can be connected to computers through MIDI port to handle audio?

i. Synthesizer
ii. Sampler
iii. Sequencer

(3 marks)

d. Software piracy is a serious threat in all stages of software development, it will affect a company's profitability which in turn affecting budget allocated for research and development. To encounter this threat, few actions had been taken by most companies. Explain **THREE (3)** actions to combat software piracy.

(3 marks)

End of Paper